

BOTANY.—*New South American species of Rubus.* ALWIN BERGER,
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(Communicated by A. S. Hitchcock.)

The United States National Herbarium is rich in South American material of the genus *Rubus*, the extensive collections of J. N. Rose, A. S. Hitchcock, F. W. Pennell, and E. P. Killip having been recently added to it. In view of the investigations which I have been carrying on in this genus all of this material was sent me, and I have thus had an opportunity for thorough study. Although convinced that the collection contains several new species and forms, I hesitate to describe more than the following.

***Rubus gachetensis* Berger, sp. nov.**

Rami floriferi teretes, breviter dense griseo-tomentosi aculeis parvis sparsis recurvis armati; rami steriles desunt. Stipulae ovatae, obtusae. Folia ternata, suprema subtriloba vel simplicia; petioli 1 cm. longi, tomentosi, parce aculeati petiolulus medius fere aequilongus; foliola obovata, obtusa, coriacea, supra glabra nitidula vel minute puberula, subtus griseo-tomentosa, in costa media parce aculeata, costis lateralibus utrinque 6, (5-7) margine recurvulo inaequaliter crenato-serrata, foliola terminalia, 4-5 cm. longa, 3 cm. lata. Ramuli floriferi axillares et terminales 3-5-flori; pedicelli 1-3 cm. longi, villosotomentosi, aculeis recurvis armati. Calyces tomentosi, sepalis ovato-deltaeideis 6 mm. longis, petala duplo longiora rubra.

COLOMBIA: Camino de Gachetá, in forests, alt. 2300 m. *Brother Aristoseph* A543.—Flowering, January 1920. (Type, U. S. National Herbarium, no. 1,059,773.)

Species subgeneris "Orobatus" Focke, *Rubo mandonii* affinis, differt foliis coriaceis, obtusis, paucinerviis etc.

***Rubus choachiensis* Berger, sp. nov.**

Fruticosus, ut videtur decumbens. Rami teretes, ut petioli, petioluli etc. dense tomentosi aculeisque minutis recurvis parum numerosis asperi. Folia ternata. Stipulae magnae ovatae, acutae, integrae vel subcrenulatae. Petioli 3-4 cm. longi, petioluli terminales 15 mm. longi, laterales brevissimi. Foliola crassa, obovato-oblonga, basi rotundata, breviter acuta, utroque latere nervis 8-10 percursa, supra obscure viridia velutino-pubescentia, subtus densissime incano-tomentosa, costula media aculeata, margine subaequaliter crenato-serrato, terminalia 5-8 cm. longa et 4 cm. vel ultra lata, in ramis floriferis minora obtusiora. Flores 3-4 in ramulis lateralibus racemosi; pedicelli 10-13 mm. longi ut calyces dense tomentosi, aculeolis sparsis armati. Sepala orbiculari-ovata, cuspidata, 7 mm. longa et 8 mm. lata; petala longiora pulchre coccinea.

COLOMBIA: Dept. of Cundinamarca, Paramo de Choachi, near Bogotá, alt. 3700 m.—"Low shrub, flowers deep red." *E. P. Killip & Brother Aristoseph* 11967.—Flowering, August 8, 1922. (Type, U. S. National Herbarium, no. 1,140,050.)

Species ex subgenere "Orobatus" Focke, affinis *Rubo weberbaueri*, differt autem habitu robustiore, tomento eglanduloso, calycis lobis late ovato-deltaeideis.

Rubus roseorum Berger, sp. nov.

Fruticosus. Caules floriferi teretes, brunnei, puberuli, aculeisque recurvis complanatis armati aliisque setiformibus sparsis asperi, superne ut petioli, pedunculi etc. glandulis stipitatis confertis vestiti. Folia inferiora quinata, superiora ternata, floralia simplicia; stipulae subulatae; petioli 5-6 cm longi, dense glandulosi, aculeisque 3-4 recurvis armati; petioluli consimiles, terminalis circ. 15 mm. longus. Foliola oblongo-lanceolata, breviter acuminata, basi rotundata vel vix cordata, terminale 6-7 cm. longum et ultra 3 cm. latum, lateralia minora, membranacea, costularum mucronibus dentibusque interjectis serrulata, costulae laterales 10-12, utrinque glabra, costulis tamen puberulis. Inflorescentiae terminalis inferne foliferae rami pedicellique albo-villosi glandulisque stipitatis brunneis muniti. Sepala ovato-delhoidea, utrinque albo-tomentosa glanduligera, petalis albis oblongis dimidio breviora.

ECUADOR: Vicinity of Quito. *J. N. Rose & George Rose* 23548. Flowering and fruiting, October 26 to November 1, 1918. (Type, U. S. National Herbarium, no. 1,023,038.) Chillo Valley; Santa Rosa, alt. 9600 ft. *H. E. Anthony & G. H. H. Tate* 204. Fruiting, August 26 to September 2, 1923.

Eubatus e grege *Adenotrichorum* Rydb. Frutex ut videtur e humilioribus, caules steriles adhuc ignoti.

I take pleasure in naming this species for Dr. J. N. Rose and his son, Mr. George Rose, who accompanied his father in 1918 to South America, and who always showed a great interest in plants, and did much good work.

Rubus killipii Berger, sp. nov.

Fruticosus. Rami floriferi teretes, minute tomentelli demum glabrescentes, aculeis raris vel deficientibus. Folia ternata; stipulae subulatae; petioli 6 cm. longi, minute tomentelli aculeisque nonnullis falcato-recurvis sat robustis armati; petiolulus terminalis 3 cm. longus, laterales 5 mm. longi. Foliola oblonga, utrinque rotundata, apice abrupte acuminata, coriacea, dura, glabra, supra nitidula obscure viridia nervis impressis tomentosulis, subtus pallidiora costaque aculeata, utrinque nervis lateralibus 8-10 rectangulariter patentibus prominentibus minute puberulis percursa, secus margines dentibus parvis minute mucronatis remote serrata; foliolum terminale circa 12-13 cm. longum et 9 cm. latum. Inflorescentiae amplae eximie multiflorae rami inferiores axillares circa 40 cm. longi, ut pedunculi pedicelli calycesque dense tomentosi. Pedicelli 1 cm. longi, bracteis deltoideis vel lanceolatis tomentosis muniti; calycis lobi ovato-delhoidei breviter cuspidati, 5-7 cm. longi reflexi; petala obovata obtusa 12 mm. longa rosea; stamina numerosa, carpella tomentosa.

COLOMBIA: Department of El Cauca, "La Gallera," Micay Valley, Cordillera Occidental. Clearing near Río San Joaquin, alt. 1100-1300 m. "Shrub, petals pink." *Ellsworth P. Killip* 7835. Flowering, June 29-30. 1922. (Type, U. S. National Herbarium, no. 1,142,423.) "The place where I collected this was about the most isolated imaginable, away down in the southwestern corner of Colombia. Two new genera and a number of new species have been found among these specimens." (E. P. Killip.)

Frutex ut videtur altus, copiose ramosus, floribundus et praepulcher, ex affinitate *Rubi florulenti*, Portoricensis plantae, sed robustior in omni parte, caulibus minus aculeatis, et foliis floribusque majoribus.

I take great pleasure in naming this species for Mr. E. P. Killip who has done so much for the exploration of the Colombian flora.